UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101

April 30, 2007

Reply to
Attn Of: ETPA-088 Ref: 06-015-AFS

Forrest Cole, Forest Supervisor
USDA Forest Service
Alaska Region, Tongass National Forest
648 Mission Street
Ketchikan, Alaska 99901

Dear Mr. Cole:

The U.S. Environmental Protection Agency (EPA) has reviewed the **Draft Environmental Impact Statement (DEIS) and Proposed Tongass Land and Resource Management Plan (TLMP) Amendment** for the Tongass National Forest in southeast Alaska (CEQ No. 070003). Our review has been conducted in accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act. Section 309 specifically directs the EPA to review and comment in writing on the environmental impacts associated with all major federal actions. Under our Section 309 authority, our review of the DEIS will consider the expected environmental impacts, and the adequacy of the EIS in meeting procedural and public disclosure requirements of NEPA.

The 16.8 million acre Tongass National Forest is the largest forest in the National Forest System. Management of this forest is guided by the Tongass Land Use Management Plan (Forest Plan). The current Forest Plan was revised in 1997, and was intensively reviewed in 2005 (5-Year Review). Since 1997, the Forest Service (FS) has been responding to a variety of appeals and litigation on the processes that were used to create the 1997 Plan. In August 2005, the U.S. Court of Appeals for the Ninth Circuit issued a decision that found deficiencies in the process used to develop the 1997 Forest Plan revision. Specifically, the Court found inadequacies related to timber demand, the range of alternatives considered relative to timber demand and potential effects on roadless areas, and cumulative effects from activities conducted on non-National Forest System lands.

The current DEIS is intended to address these deficiencies, and to incorporate opportunities identified through the 5-Year Review into the Plan. The DEIS considers projections of timber products output and timber harvest over the next 20 years under four different timber demand scenarios (low to high). The DEIS evaluates seven alternatives that encompass all of these demand scenarios in a variety of ways, while addressing three key issues. Those key issues are identified as:

- Key Issue 1 – Protection of high value roadless areas from road development and timber harvest activity on the Tongass National Forest is of local and national importance, particularly for wildlife and biodiversity, recreation, and tourism.

- Key Issue 2 – The Tongass National Forest needs to provide a sufficient timber supply to meet the market demand and help maintain a vibrant economy in Southeast Alaska.
- Key Issue 3 – Protection of the wildlife habitat and biodiversity of the Tongass National Forest is of local and national significance and is affected by road development and timber harvest activities.

The alternatives differ principally in the amount of land designated for development (in development land use designations or LUDs), and the amount of timber harvest proposed:

- **Alternative 1** would place 1.2 million acres in Development LUDs, and 15.6 million acres in Non-development LUDs. The estimated suitable forest land base (harvestable land base) would be .43 million acres, and the allowable sale quantity (ASQ) would be 52 million board feet (MMBF).
- **Alternative 2** would place 2.0 million acres in Development LUDs, and 14.8 million acres in Non-development LUDs. The estimated suitable forest land base would be .54 million acres, and the ASQ would be 152 MMBF.
- **Alternative 3** would place 3.0 million acres in Development LUDs, and 13.8 million acres in Non-development LUDs. The estimated suitable forest land base would be .68 million acres, and the ASQ would be 204 MMBF.
- **Alternative 4** would place 4.7 million acres in Development LUDs, and 12 million acres in Non-development LUDs. The estimated suitable forest land base would be 1.01 million acres, and the ASQ would be 360 MMBF. In addition, Alternative 4 uses a different strategy to provide old-growth habitat.
- **Alternative 5** is the no action alternative. This alternative would maintain 3.6 million acres in Development LUDs, and 13.2 million acres in Non-development LUDs. The estimated suitable forest land base would be kept at .76 million acres, and the ASQ would remain 267 MMBF.
- **Alternative 6** is the proposed action alternative. This alternative is similar to Alternative 5 (3.6 million acres in Development LUDs, and 13.2 million acres in Non-development LUDs), however, it includes refinements to the boundaries of a number of small old growth reserves and other refinements. The estimated suitable forest land base would be .79 million acres, and the ASQ would be 267 MMBF.
- **Alternative 7** would place 5.1 million acres in Development LUDs, and 11.7 million acres in Non-development LUDs. The estimated suitable forest land base would be 1.15 million acres, and the ASQ would be 421 MMBF. In addition, Alternative 7 would have the least restriction on harvest in old-growth forest. It does not include old-growth reserves or have minimum old-growth retention requirements.

The EPA appreciates the efforts of the Tongass National Forest in preparing this DEIS and in developing an innovative website and CD to help agencies and the public analyze impacts associated with the proposed alternatives. We have assigned a rating of EC-2 (Environmental Concerns – Insufficient Information) to the DEIS. This rating and a summary of our comments will be published in the Federal Register. A summary of the rating system we used in conducting our review of the DEIS can be viewed at http://www.epa.gov/compliance/nepa/ comments/ratings.html. The FS did not identify a preferred alternative, therefore we focused our review on the full suite of alternatives within the context of the three key issues identified in the document.

Based on this review, we find alternatives 1, 2 and 3 to be environmentally preferable. These alternatives provide significant protection of water quality and a connected network of aquatic and terrestrial habitats, afford extensive protection of old growth, minimize road development and associated impacts, and provide a sustainable supply of timber consistent with current and recent timber harvest levels. The conservation emphasis under these alternatives is less sensitive to agency budget levels and less dependant on active management. Our environmental concerns with Alternatives 5 and 6 primarily relate to high and moderate intensity land use designations, increased road development, and associated impacts to aquatic and terrestrial habitats and water quality. Additional information on how these impacts will be minimized and on monitoring and adaptive management strategies should be provided in the FEIS. We believe that as currently proposed, Alternatives 4 and 7 do not address key issues 1 and 3, and hence, are not viable. EPA would have serious objections to the selection of Alternative 4 or 7 as the Preferred Alternative in the Final EIS/Record of Decision.

In general, we recommend that the FS select an Alternative in the Final EIS and Record of Decision that:

- Minimizes the acreage of forest designated for Intensive or Moderate Development;
- Protects high value roadless areas for wildlife and biodiversity, recreation and tourism, thus supporting local and regional economic viability and subsistence activities;
- Accurately reflects the most recent timber industry market trends; and
- Clearly identifies monitoring plans and adaptive management strategies to be employed for the next planning cycle.

Thank you for the opportunity to comment on this draft EIS. If you would like to discuss our response further, please contact Jennifer Curtis, at (907) 271-6324 or me at (206) 553-1601.

Sincerely,

/s/

Christine Reichgott, Manager
NEPA Review Unit

Enclosure

cc: Lee Kramer, Project Manager, Tongass National Forest

EPA Region 10 Detailed Comments
Tongass Land and Resource Management Plan Amendment
Draft Environmental Impact Statement

As noted above, the FS identified three key issues to frame each of the alternatives. EPA appreciates this strategic and focused approach to the Plan amendment. We have accordingly structured our own detailed comments around the identified key issues.

Key Issue 1 - Protection of high value roadless areas from new roads and timber harvest is locally and nationally significant for wildlife and biodiversity, recreation, and tourism.

EPA agrees with the identification of high value roadless areas as a key issue, and we commend the FS for establishing this as a standard of review. The Tongass is the earth's largest, intact temperate rainforest, and contains some of the largest, intact blocks of forest in North America. Each of the 21 distinct bio-geographic provinces within the Tongass contributes to the biodiversity of the national forest system, making the Tongass rich with endemic species. The Tongass also contains nearly 5,000 salmon-supporting streams (Halupka et al. 2000). These streams provide the spawning and rearing habitat for more than 90 percent of the salmon commercially caught in southeast Alaska.

As recognized in the document, those alternatives that place emphasis on maintaining inventoried roadless areas (IRA), protecting productive old growth (POG), and limiting road construction and the amount of acreage placed in Development LUDs, pose a lower risk of direct and indirect effects to focal resources. Alternatives 1 and 2 perform well against this measure. As noted on page 2-41, none of the 21 biogeographic provinces would contain less than 50 percent of their areas in Non-development under these alternatives. Alternatives 3, 5, and 6 represent higher harvest levels and additional road building, but would retain good to very good spacing of old growth reserves and other Non-development LUDs. These alternatives are less protective than Alternatives 1 and 2 but, when taken together with site-specific analyses and interagency monitoring, continue to address Key Issue 1. Alternatives 4 and 7 would each result in five biogeographic provinces with less than 50 percent in Non-development LUDs, and do not appear to be as responsive to Key Issue 1.

We are particularly concerned about the number of roads that would be constructed under Alternatives 4 and 7. At present, there are 4,942 miles of road on the Forest. The Tongass Road Condition Survey Report (ADFG, 2000) looked at approximately 40 percent of these roads (2,153 miles). The report documents numerous instances of ditch plugging, ditch erosion, cut-slope and fill-slope erosion, road surface erosion, catch basin failure, ditch blockage, culvert inlet and outlet erosion, and other system failures. These are the very kinds of failures that resulted in the listing of Katlian River and Nakwasina River on the CWA 303(d) list for sediment and turbidity. In addition, the Road Condition Survey indicates that 66 percent of the culverts across anadromous streams (Class I streams) are assumed not to be adequate for fish passage, and eighty-five percent of the culverts across resident fish streams (Class II streams) are assumed not to be adequate for fish passage. EPA acknowledges that the FS has used the results of this report to help target restoration work, and to acquire additional road maintenance funding. We also note, however, that the 2003 Forest Level Roads Analysis for the Tongass (p. 75) indicates that deferred costs for solving all passage problems at maintenance level 3, 4, and 5 road-stream crossings could be as high as $30 million. Given current budget shortfalls and anticipated

reduction in staff, we question the ability of the FS to maintain the existing road network, address fish passage and other road-related issues (such as drainage and road stability), while at the same time undertaking to construct over 5,000 miles of new road. We recommend that the document give discussion to how the FS will meet the proposed construction, maintenance and decommissioning goals while continuing to address the deferred maintenance backlog. A recent letter from the Wrangell District Ranger, Mark Hummel, regarding the decision to select an alternative for the Wrangell District Road Analysis and Access and Travel Management Plan stated the following: "This alternative will reduce the potential for resource damage more than any other alternative by removing the most miles of risk from culvert failure, loss of fish passage, erosion, and sedimentation. The sooner the District acts to close roads it can no longer maintain, the more likely that funding is available to close them. Funding is currently anticipated for the next few years. After that, the likelihood is greatly reduced." This statement recognizes that budget shortfalls will continue into the future.

In addition, we note that many of the transportation corridors authorized under Public Law 109-59 would cross the Tongass, as would a number of power transmission lines currently proposed by the State of Alaska. Given that Transportation and Utility LUDs would be given priority over all underlying LUDs, including LUDs that do not normally allow road construction, it is critically important to fully analyze road-related cumulative impacts. We recommend that the document more fully address the cumulative impacts of existing roads, the proposed increase in roads under the various alternatives, road activity on non-NFS land, and the proposed road and energy infrastructure under Public Law 109-59.

Lastly, we note that the DEIS states that, "[p]rotection for riparian areas would be the same under all alternatives" (p. 3-40). Regardless of which alternative or combination of alternatives the FS selects, EPA recommends that the Forest Plan Amendment include the riparian standards and guidelines as shown in the Proposed Land and Resource Management Plan (p. 6-41).

Key Issue 2 – The Tongass National Forest needs to provide a sufficient timber supply to meet the market demand and help maintain a vibrant economy in Southeast Alaska.

EPA agrees with the identification of sufficient timber supply as a key issue. As noted in the document (page 3-424), the Tongass Timber Reform Act (TTRA) of 1990 states that "…the Secretary shall, to the extent consistent with providing for the multiple use and sustained yield of all renewable forest resources, seek to provide a supply of timber from the Tongass National Forest which (1) meets the annual market demand for timber and (2) meets the market demand for each planning cycle." Additionally, we recognize that there is a particular need in southeast Alaska for year-round, family wage employment, as well as a need to strengthen and diversify the regional economy.

The Alternatives proposed in the DEIS roughly correspond with four timber demand scenarios developed by Brackley et al. (2006): (1) Limited Timber Production (under this scenario, total derived demand is projected to be 65 MMBF in 2020); 2) Expanded Lumber Production (163 MMBF in 2020); 3) Medium Integrated Industry (204 MMBF in 2020); and 4) High Integrated Industry (325 MMBF in 2020).

The document gives discussion on page 3-441 to the ability of the various alternatives to meet these demand scenarios. In general, Alternatives 1 and 2 would be sufficient to meet

limited timber production. Alternatives 3, 5 and 6 would provide volume sufficient to meet scenarios 1 thru 3 (up to the medium integrated industry scenario). Only Alternatives 4 and 7 would provide volume sufficient to meet scenario 4 (high integrated industry). We do not disagree with the premise that sufficient "shelf volume" is needed in order for the timber economy to fully realize market demand and stimulate investment (thereby addressing key issue 2) but we do question the attainability of the highest volume scenario (scenario 4 - high integrated industry).

The model developed by Brackley et al. considers a number of drivers affecting timber demand (timber statistics, trade data, etc.), but is unable to account for other factors potentially affecting timber demand, such as competition, fuel costs, labor costs, complicated shipping logistics, litigation and Congressional action. The study in fact notes (p. 34) that changing conditions in Alaska and world markets are rapidly making the existing model and approach obsolete, and that future attempts to project demand for National Forest timber in Alaska will require new methods and additional information.

We also note that the Forest has not harvested over 50 MMBF annually since 2000, and that the wood products industry accounted for only 1 percent of total regional employment in 2004 (p. 3-413). Notably, this is under the current ASQ of 267 MMBF, which according to the study is enough to support medium integrated industry. The lack of investor response to date would seem to indicate that there are variables outside the realm of FS influence (and available ASQ) that are limiting investment into wood products in the Tongass region.

Additionally, we question some of the assumptions in the DEIS related to projected employment. Page 3-449 indicates that projected timber industry employment figures were calculated assuming a linear relationship between harvest and employment levels (a one percent change in harvest resulting in a one percent change in employment). We are concerned that not only will changes in employment will lag changes in harvest, but that given current trends in automation, there is not a direct linear relationship between harvest and employment. This could lead to an overestimation of the amount of employment generated by the higher timber output scenarios. An examination of the timber market in Oregon concluded that even if harvest levels could be maintained, increased productivity would result in a 1.2% drop in employment over a 7-year period (Conway and Wells 1994).

In summary, Alternative 1 would maintain current harvest levels. As noted by the Brackley study, this may be the "most probable outcome" (p. 32), but it also falls short of fully satisfying key issue 2. Alternatives 2, 3, 5 and 6 would provide for a timber economy that is expanded from present levels. It is likely that each of these alternatives would, to varying degrees, satisfy key issue 2. Alternatives 4 and 7 would clearly provide ASQ levels sufficient to meet any potential timber demand, but, given the noted uncertainties surrounding the timber economy in Alaska, we question the whether these sale quantities are in fact attainable.

Key Issue 3 – Protection of the wildlife habitat and biodiversity of the Tongass National Forest is of local and national significance and is affected by road development and timber harvest activities.

EPA agrees with the identification of wildlife habitat and biodiversity as a key issue. The Tongass is naturally fragmented by islands and coastal ice fields and many of the islands have

distinct climatic, floral, and faunal differences. This presents a challenge for conservation of biodiversity and highlights the need to manage for intact habitats as a priority.

Impacts to habitat and biodiversity vary under the alternatives according to the amount of road construction and timber harvest proposed. Because ecosystems in naturally fragmented landscapes are less resilient to further fragmentation, logging additional unroaded areas poses a higher risk to species existence and persistence.

Chapter 3 of the DEIS provides an excellent discussion of the effects of the alternatives on landscape connectivity and biodiversity, noting the importance of an intact Old Growth Reserve (OGR) strategy in terms of ensuring long-term habitat viability. The reduction of OGR protections under Alternative 4, and the elimination of OGR protection under alternative 7, would effectively eliminate old-growth connectivity across numerous ecological "pinch-points" (3-187) and reduce the functional connectivity of the old-growth ecosystem (3-188).

Based on the information provided, we concur that Alternatives 4 and 7 could have a low likelihood of maintaining viable, well-distributed populations (3-186), and that Alternative 7, in particular, would result in the greatest loss of biodiversity among the alternatives (3-143). Based on the analysis, it seems clear that Alternatives 1 and 2 would result in good distribution of high quality old-growth over the long term, Alternatives 3, 5 and 6 would likewise continue to provide good habitat distribution, though to a lesser degree (affecting one ecological "pinch-point") and Alternatives 4 and 7 do not meet key issue 3.

In addition to old-growth as a habitat component, we are concerned about affects to wetland structure and function due to timber harvest and road construction. As noted on page 3-47, wetlands provide important physical, biological, and chemical functions that contribute to the overall functioning within a watershed and landscape. These functions are particularly critical to maintaining stream health. Page 3-45 indicates that 22 percent of existing road miles are in wetland areas. New road miles under the various alternatives range from 434 miles under alternative 1 to 2,043 under Alternative 7. As noted above, road impacts have resulted in the listing of two Tongass streams on the state 303(d) list. We are concerned that opening new wetland areas to road construction and harvest could increase sediment yield to streams within the Tongass and, subsequently, add more miles of streams to the 303(d) list. Site specific analysis and the TLMP riparian conservation strategy will help to mitigate some of these impacts, but as the FS has recognized, road construction can have significant unavoidable adverse impacts to water quality, regardless of how well the roads are designed constructed or maintained (USFS, 2001). Given the potential adverse effects of roads on aquatic life, we feel that in order to be consistent with key issue 3, the FS should pursue an alternative that minimizes road construction, particularly in wetland areas.

EPA Recommendation for a Preferred Alternative

Alternatives 1, 2, and 3 place the most emphasis on maintaining inventoried roadless areas (IRA), protecting productive old growth (POG), and limiting road construction and the amount of acreage placed in Development LUDs. These alternatives are environmentally preferable from a water quality, habitat, and roadless value perspective. Alternatives 5 and 6 are more responsive to key issue 2, and seek to strike a balance on habitat and roadless values, but result in significantly greater impacts. Given site-specific analysis and interagency monitoring, it is likely

that Alternatives 5 and 6, together with the robust TLMP aquatic and riparian strategy, would continue to address key issues 1 and 3. Alternatives 4 and 7 appear designed to respond principally to key issue 2, and in fact go beyond the ASQ deemed necessary for a highly integrated industry. We are concerned not only with the assumptions driving this high ASQ, but also with the lack of responsiveness these alternatives demonstrate to key issues 1 and 3.

Regardless of which alternative is selected in the Final EIS and Record of Decision, we cannot stress enough the importance of continuing to engage Federal and non-Federal partners in the monitoring and assessment of the Land Management Plan (including POG designation). The Forest's use of the 1984 planning rule to pursue this amendment is testament to the Forest's commitment to broad collaboration. We commend you for making this a priority, and encourage you to maintain that focus as the plan moves once again into implementation. Specifically we request that the Interagency Monitoring Group be engaged in the 5-Year Review process, in addition to the involvement it has in the annual assessment report.

Comments Specific to the Tongass National Forest, Proposed Land and Resource Management Plan with EIS Appendices, January, 2007

Page 4-92 to 4-93, Watershed Resources Improvements: S&W2, I. Soil and Water Quality Protection and Improvement

Past road building and timber harvest activities, in combination with extensive harvest on adjacent private lands, have negatively impacted water quality and watershed health. This is particularly true for those biogeographic provinces with a history of intensive timber harvest (such as Kupreanof-Mitkof islands). Watershed restoration should be a major focus of the Forest Plan for these areas in order to ensure that they do not lose their ecological integrity.

The Soil and Water standards and guidelines talk of the need to "improve" these areas. This terminology does not adequately convey the current impaired status of these watersheds. Furthermore, when speaking of water quality protection, the wording in the Plan should be consistent with wording in the Clean Water Act. That Act mandates *restoring* and *maintaining* the chemical, physical and biological integrity of the nation's waters. We recommend amending S&W2 to remove the words "improve" or "improvement" and insert the words "restore" or "restoration."

Page G-2, Appendix G – Log Transfer Facility Guidelines, S7. Siting Guidelines

Impacts of Log Transfer Facilities (LTFs) typically include: 1) disruption of biota during log transfer and storage; 2) leaching of soluble materials that may be toxic; and 3) loss of bark and resultant effects on the benthos (Jackson, 1986). In order to avoid cumulative effects on sensitive marine environments, an examination of past and current LTF impacts should be made prior to siting. We recommend that the Siting Guidelines require a cumulative impact assessment prior to siting that references the following parameters: 1) measurements of bark and organic accumulation; 2) measurements of the concentration of organic log leachates, biological oxygen demand, dissolved oxygen, and hydrogen sulfides; and 3) a comparative survey of the kinds and relative abundances of benthic organisms.

Page 4-20, Invasive Species Protection

Invasive species can aggressively spread into areas altered by road construction and harvest activities. Nationally, as well as in Alaska, the establishment of invasive nuisance species has rapidly become an issue of extreme environmental and economic significance. EPA commends the FS for incorporating invasive species standards and guidelines into the Plan. We recommend that the new section be expanded upon to include discussion of Integrated Pest Management (IPM). EPA promotes IPM because it represents a prudent approach to understanding and dealing with environmental concerns. IPM promotes a thoughtful awareness of the pest management inherent in natural systems through an understanding of pest life cycles and through the use of beneficial organisms, cultural modifications, physical barriers and other mechanical controls. It does not rule out the use of pesticides, but requires that their use be thoughtfully considered.

We also recommend that the Invasive Species section discuss compliance with Executive Order (EO 13112) on invasive species. This Order emphasizes the need to address invasive species in the context of NEPA, and mentions six key categories of issues federal agencies should consider. Specifically, the Order states: "Each Federal agency whose actions may affect the status of invasive species shall, to the extent practicable and permitted by law:

> (1) identify such actions. [and]
>
> (2) use relevant authorities to: (i) prevent the introduction of invasive species, (ii) detect and respond rapidly to and control populations of such species..., (iii) monitor invasive species populations reliably and accurately, (iv) provide for restoration of native species and habitat conditions in ecosystems that have been invaded; (v) conduct research on invasive species and develop the technologies to prevent introduction and provide for environmentally sound control of invasive species and (vi) promote public education on invasive species..., and
>
> (3) not authorize, fund or carry out actions that it believes are likely to cause or promote the spread of invasive species in the U.S. or elsewhere unless...benefits of such actions clearly outweigh the potential harm caused....".

Page 6-3, Monitoring and Evaluation

EPA continues to view the Monitoring and Evaluation Plan in Chapter 6 as a critically important element of the proposed Plan, especially with the FS's application of an adaptive management strategy to forest planning activities on the Tongass. An interagency monitoring and evaluation program designed to provide the necessary feedback on the successes (and failures) of management practices specified in the Plan and implemented on-the-ground is the cornerstone of a successful adaptive management strategy. EPA's support of the current Plan continues to be predicated on the full implementation of a successful interagency monitoring and evaluation program. In light of budget shortfalls, we are encouraged that the FS is continuing to place a high level of emphasis on monitoring in the Plan. We ask that you continue to work in close collaboration with other Federal and non-Federal partners as you move forward with this program.